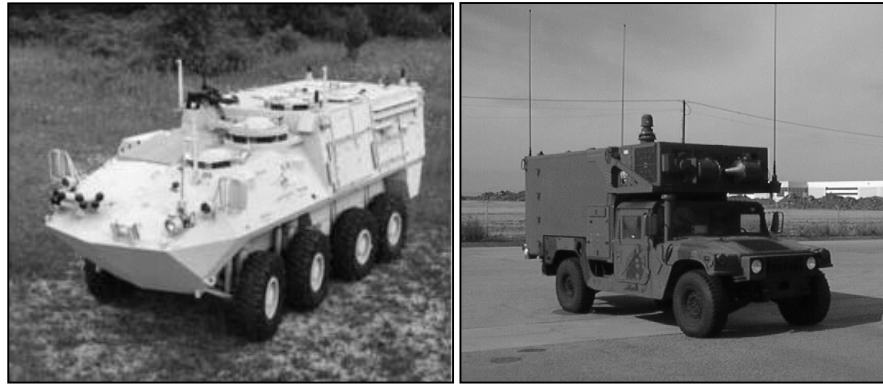


## **JOINT SERVICES LIGHT NUCLEAR, BIOLOGICAL, AND CHEMICAL RECONNAISSANCE SYSTEM (JSLNBCRS)**



The Joint Services Light Nuclear, Biological and Chemical Reconnaissance System (JSLNBCRS) is a specialized, mobile reconnaissance system intended to detect and report NBC hazards on the battlefield. The JSLNBCRS consists of a Base Vehicle equipped with hand-held and vehicle-mounted NBC detection and identification equipment. Detectors selected for use on the JSLNBCRS provide the capability to sample, detect, and identify known NBC agents as well as Toxic Industrial Materials (TIMs). Communications equipment is required to transmit analog and digital messages and NBC contamination warnings. A system for marking contaminated areas is also included. Local meteorological and accurate navigation information is provided by onboard meteorological and global positioning systems. Two base vehicles are planned: the High Mobility Multipurpose Wheeled Vehicle (HMMWV) for the Army, Air Force, and Marine Corps, and the Light Armored Vehicle (LAV) for the Marine Corps.

JSLNBCRS will provide new sensors and information dissemination systems to detect chemical or biological attack at extended ranges and provide warning to affected units. JSLNBCRS will be employed in forward combat areas and integrated into the overall reconnaissance and surveillance effort to support combat operations. It will also be employed in rear areas to monitor main supply routes, logistics bases, airfields, ports, and key command and control centers for NBC hazards.

### **BACKGROUND INFORMATION**

On June 26, 2001, the Milestone Decision Authority (MDA), Commander, Marine Corps Systems Command, approved JSLNBCRS's entry into System Development and Demonstration (SSD). A Milestone C for the HMMWV variant is currently scheduled for the 4QFY02. A Low-Rate Initial Production (LRIP) is planned for 14 HMMWV systems to be used in production qualification testing, logistics demonstrations, interoperability/information assurance testing, reliability and maintainability testing, and for IOT&E. The Program Manager is considering production options, which may change the configuration of the vehicle. The MDA established the following Phase B exit criteria for the program:

- Successful developmental test and field user test.
- Establishment of a configuration baseline for the HMMWV and LAV variants. This will include documented agreement by all participating Services regarding the sensor, diagnostic, and communications suite that will be installed in the system as it enters production.
- Achievement of all Key Performance Parameters listed in the Joint Operational Requirements Document.

## **TEST & EVALUATION ACTIVITY**

The JSLNBCRS TEMP was approved by DOT&E on June 11, 2001.

DT II is planned for the HMMWV variant from February 2002 to May 2002. A Limited User Test (LUT) will follow DT II, which is intended to support the LRIP decision in October 2002. The HMMWV LUT will test the operational effectiveness and suitability of JSLNBCRS performing reconnaissance and security missions in a combined USMC-USA ground scenario and a combined USMC-USAF airbase scenario. A DT III of the LRIP units will follow the LUT to address operational issues found in testing before the IOT&E.

Two LAV vehicles, which have been refurbished, will be integrated with the common JSLNBCRS mission suite from July 2001 to October 2002. DT II for the LAV system is planned from January 2003 to October 2003 and precedes the IOT&E.

A common HMMWV-LAV IOT&E will repeat similar mission scenarios and test scope as the Limited User Test, with the addition of a USMC LAV amphibious reconnaissance and security scenario.

## **TEST & EVALUATION ASSESSMENT**

Since JSLNBCRS was placed under DOT&E oversight in January 2000, the Program Manager has worked diligently to address DOT&E concerns with the TEMP. Because of DOT&E's involvement with the revision process, the TEMP now does a credible job of identifying key decision points in the program, and tests required to support these decisions. Realistic scheduling is used throughout the program's strategy. For example, redesign and retest are built in after the Limited Use Test to respond to system problems discovered in the test. The test scope clearly addresses mission, tactical events, operational profiles, battlefield conditions, military operators, threat dissemination, command and control, and resources.

The most significant problem facing the JSLNBCRS program is the integration, performance, and stability of the NBC suite for IOT. JSLNBCRS, which is dependent on several key programs, including Joint Service Lightweight Standoff Chemical Agent Detector (JSLSCAD), Joint Biological Point Detection System (JBPDS), and Chemical Biological Mass Spectrometer (CBMS), will be challenged by the timing and performance of these independently managed systems. This risk explains the MDA's rationale for establishing a clear configuration baseline before operational testing and production. These dependencies will be closely monitored by DOT&E. The prospect of changing production configuration raises the issue that the system that will be tested in IOT&E might not be the system that is fielded. A Follow-On Test and Evaluation must be conducted for the full-rate production system.

In the past year the Commander, Army Chemical School, has developed a requirement to use the Interim Armored Vehicle as the platform for NBC reconnaissance. If implemented, this requirement would terminate Army participation in the JSLNBCRS program. Although this is not yet the Army position, it has the practical effect of hindering current planning for operational testing.

Among the six original chemical-biological systems placed under DOT&E oversight, the JSLNBCRS has the only DOT&E-approved TEMP. The JSLNBCRS TEMP is a model for other chemical-biological test programs. The JSLNBCRS program should have a successful test and evaluation if the TEMP is executed, and if JSLSCAD, JBPDS, and CBMS are mature enough and integrated to be tested as part of the system.

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